

## CLAIMS

*Sub  
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1. ~~Frame for a sporting device for coupling to~~  
a shoe, such as a ski which is slidable or rollable by  
means of wheels, in particular a cross-country ski, or a  
skate frame for an ice-skate or roller-skate, which frame  
5 comprises:

an upper sub-frame with means for coupling to a  
shoe to be worn by a user;

a lower sub-frame which is coupled via a pivot  
mechanism to said upper sub-frame for pivoting in a main  
10 plane and which is provided with or adapted to be  
provided with a runner or wheels; and

resetting spring means for urging both sub-  
frames toward each other;

characterized in that  
15 the sub-frames are mutually pivotable and  
translatable in the said main plane.

2. Frame as claimed in claim 1, wherein the  
sub-frames form part of a mechanism comprising at least  
four mutually pivotable and/or translatable (optionally  
20 theoretical) rods.

3. Frame as claimed in claim 1, wherein the  
frame has only one degree of freedom.

4. Frame as claimed in claim 3, wherein the  
frame has a (real or virtual) pole path.

25 5. Frame as claimed in claim 3, wherein the  
pole path is substantially straight.

6. Frame as claimed in claim 3, wherein the  
pole path extends substantially horizontally.

7. Frame as claimed in claim 4, wherein the  
30 pole path extends between a starting position under the  
ball of the foot of a user in the rest position of the  
frame, and an end position under the big toe of the user  
in the extreme outward pivoted position of the frame.

8. Frame as claimed in claim 3, wherein at  
35 constant relative angular speed of the sub-frames the

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speed of the pole along the pole path increases from the starting position to the end position.

9. Frame as claimed in claim 4, wherein a frame is a member of the family in accordance with the table below, in which the first number designates the number of (optionally theoretical) rods, p1 designates the number of connections with one degree of freedom, p2 designates the number of connections with two degrees of freedom and # designates the presence of a well-defined pole path and therewith the suitability for a sporting device with foot bending:

	Family/member	Figure	p1	p2	suitable
15	2 / 1	8	0	2	#
	3 / 1	9	2	1	
	3 / 2	10	1	1	
	3 / 3	11	0	1	
	4 / 1	12	4	0	#
20	4 / 2	13	4	0	#
	4 / 3	14	3	2	#
	4 / 4	15	2	4	#
	4 / 5	16	1	6	#
	4 / 6	17	0	8	#
25	5 / 1	18	5	1	#
	5 / 2	19	4	3	#
	5 / 3	20	3	5	#
	5 / 4	21	2	7	#
	5 / 5	22	1	9	#
30	5 / 6	23	0	11	#
	6 / 1	24	7	0	#
	6 / 2	25	6	2	#
	6 / 3	26	5	4	#
	6 / 4	27	4	6	#
35	6 / 5	28	3	8	#
	6 / 6	29	2	10	#
	6 / 7	30	1	12	#
	6 / 8	31	0	14	#

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10. Frame as claimed in claim 9, wherein the frame comprises seven, eight, nine or ten pivot axes.

11. Frame as claimed in claim 10, wherein the frame comprises seven pivot axes.

5 ~~12. Frame as claimed in claim 11, wherein the frame is constructed as according to figure 24 and (at least the relative) dimensioning according to figure 35.~~

*Sub  
a2* > ~~13. Frame as claimed in claim 1, wherein the frame has torsional stiffness.~~

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*add  
a3  
and D-47*